

In the specification:

Amend the first paragraph on page 1 to read as follows:

This is a divisional application of Serial No. 09/418,907, now Patent No. 6,665,277, filed October 15, 1999, which is a non-provisional application claiming priority from provisional application Serial No. 60/104,445, filed October 16, 1998 under 35 U.S.C. § 119(e)(1).

Amend the paragraph bridging pages 1 and 2 as follows:

New standards are continually emerging for next generation wideband code division multiple access (WCDMA) communication systems as described in U.S. Patent Application Serial No. 09/217,759 ~~90/217,759~~, entitled Simplified Cell Search Scheme for First and Second Stage, filed December 21, 1998, now Patent No. 6,345,069, and incorporated herein by reference. These WCDMA systems are coherent communications systems with pilot symbol assisted channel estimation schemes. These pilot symbols are transmitted as quadrature phase shift keyed (QPSK) known data in predetermined time frames to any receivers within the cell or within range. The frames may propagate in a discontinuous transmission (DTX) mode within the cell. For voice traffic, transmission of user data occurs when the user speaks, but no data symbol transmission occurs when the user is silent. Similarly for packet data, the user data may be transmitted only when packets are ready to be sent. The frames include pilot symbols as well as other control symbols such as transmit power control (TPC) symbols and rate information (RI) symbols. These control symbols include multiple bits otherwise known as chips to distinguish them from data bits. The chip transmission time (T_C), therefore, is equal to the symbol time rate (T) divided by the number of chips in the symbol (N). This number of chips in the symbol is the spreading factor.

Amend the paragraph bridging pages 6 and 7 as follows:

Referring now to FIG. 5, there is a timing diagram ~~of a~~ showing a sequence of first, second and third synchronization codes of the present invention. The timing diagram includes a frame of data having a predetermined number of time slots 502,504,506. This

predetermined number of time slots preferably includes sixteen time slots in each frame. Each time slot, for example time slot 502 has a duration of 0.625 milliseconds. The time slot is further subdivided into equal symbol time periods. There are preferably ten symbol time periods in time slot 502. A first synchronization code (FSC) 508 is transmitted on a primary synchronization channel during a first symbol time of the time slot. A second synchronization code (SSC) 510 is transmitted on a secondary synchronization channel during the first symbol time of the time slot. A tertiary synchronization code (TSC) 512 is transmitted on a tertiary synchronization channel during the first symbol time of the time slot. Transmission of this tertiary synchronization code is accomplished via a circuit as in FIG. 1 having an additional multiplier circuit similar to circuit 104. This additional multiplier circuit receives the pseudo-noise (PN) code on lead 109 and a selected tertiary synchronization code and produces a modulated tertiary synchronization code. Each of the sixteen secondary and tertiary synchronization codes within the frame are preferably different from each other. Sixteen of the comma free codes in a frame form a comma free code word. These synchronization codes are preferably sixteen comma free codes taken from a set or alphabet of seventeen 256-chip short codes. This set of seventeen codes is derived from a (16,2) Reed-Solomon code as is well known in the art. Each of the selected sixteen codes corresponds to a respective time slot of the corresponding data frame. The order of the sixteen selected codes provides 256 combinations or comma free code words, each having a minimum distance of 15. These comma free code words are sufficient to uniquely identify one of sixteen groups of sixteen long codes or scrambling codes transmitted by a base station. A preferred embodiment of the present invention transmits sixteen comma free code sequences from the set $\{SC_1, SC_2, \dots, SC_{17}\}$ on the secondary synchronization channel. An exemplary embodiment of these sixteen synchronization codes is enumerated in rows of FIG. 8. The present invention optionally transmits comma free code sequences from the set $\{SC_{18}, SC_{19}, \dots, SC_{34}\}$ on the tertiary synchronization channel as will be explained in detail.